Accelerated Bridge Program
VTRANS

St Johnsbury BF 7000(20)
Bridge 6 on VT Route 2B
over the Lamoille Valley Rail Trail

VERMONT
AGENCY OF TRANSPORTATION

March 29, 2017

CONSULTING ENGINEERS

PROJECT LOCATION

Meeting Agenda

- Project Team
- Existing Bridge Issues
- Proposed Bridge Design Considerations
- Bridge Construction & Schedule
- Detours for 2B and LVRT
- Communications About Project
- Questions and Answers

Project Team

- Wendy Pelletier, VTrans Project Manager
- Jay Strong, VTrans Resident Engineer
- John Byatt, Project Design Consultant
- Francine Perkins, Public Outreach Coordinator
- JP Sicard, Contractor

Existing Bridge

- The structure is owned by the State
- Existing bridge is a three-span steel beam w/ concrete deck
- The bridge is 81 years old
- Structurally Deficient
- Deck, steel girders and substructures in poor condition

Looking west over bridge

Pier deterioration

Rust and leakage under deck

Undermining of west abutment

Temporary repair at west abutment

Design Considerations

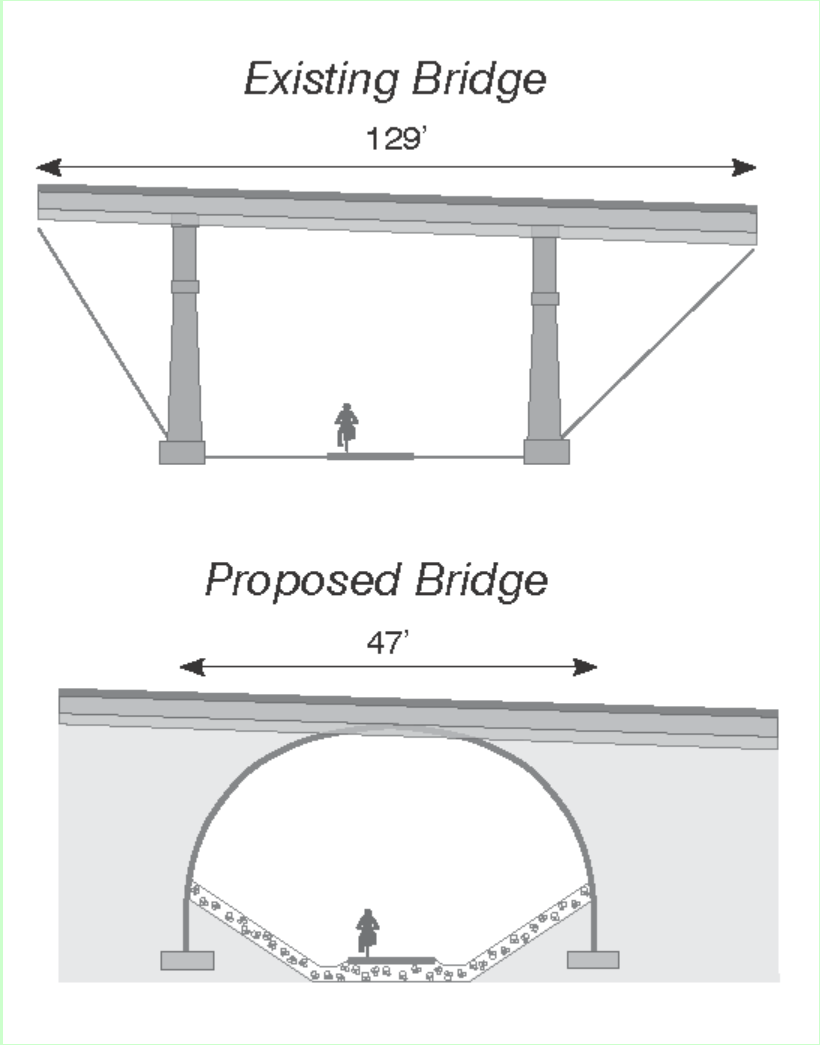
- Historically sensitive railing and wall pattern
- Minimize disruption
- Eliminate groundwater issues at abutment
- Maintain RR clearances as required by trail agreement
- Maintain existing water line

Innovative Construction Techniques

- Accelerated Bridge Construction
- Precast Bridge Elements
  - More advance time needed for approval and fabrication
- Soil Settlement Monitors
  - Bridge and wall types can accommodate settlement
  - Will monitor settlement to evaluate

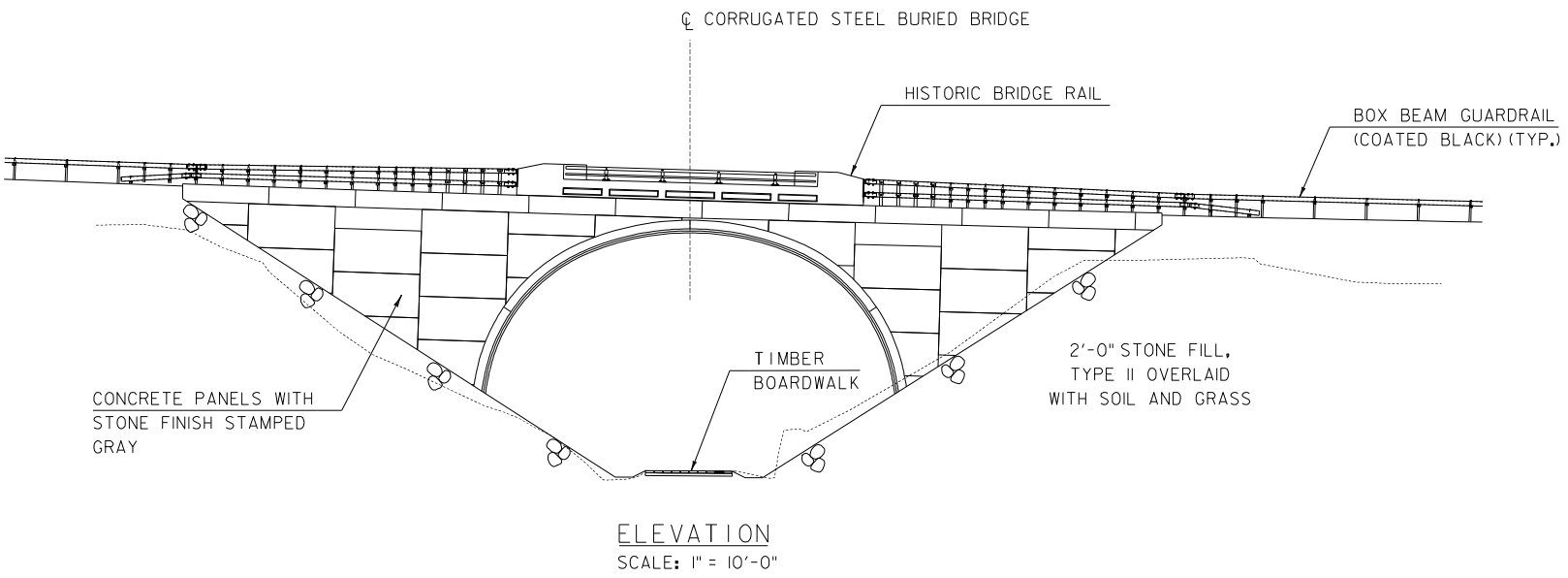
Bridge Design

- Complete replacement
- Buried corrugated metal plate 47-foot arch
- Mechanically Stabilized Earth walls (MSE)
- Precast concrete finish resembling rock

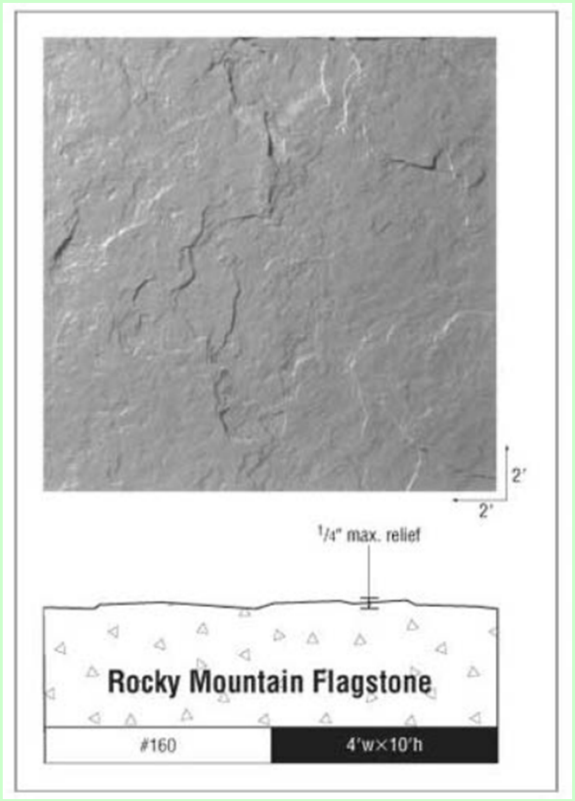


MSE Walls

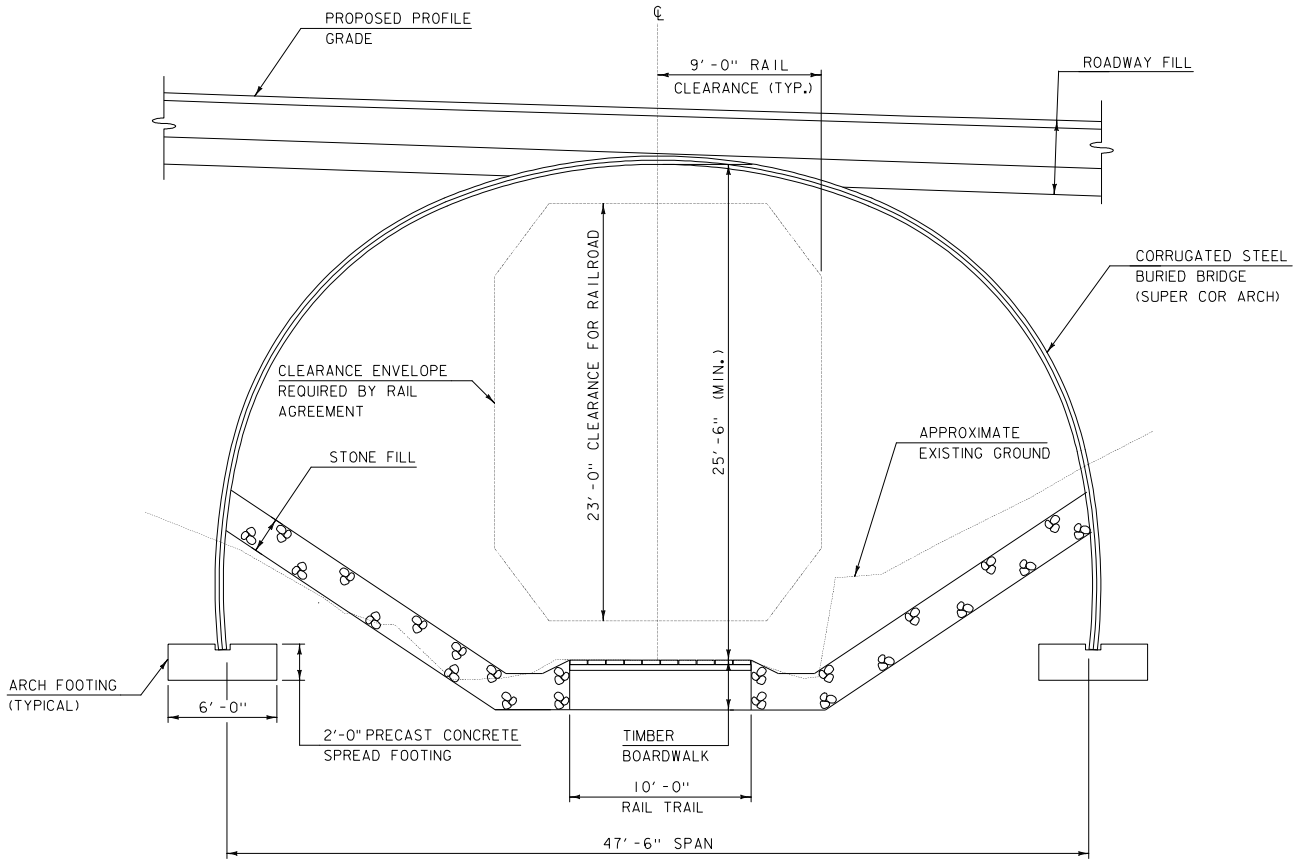
Bridge Elevation



MSE Wall and Pattern



Arch Section



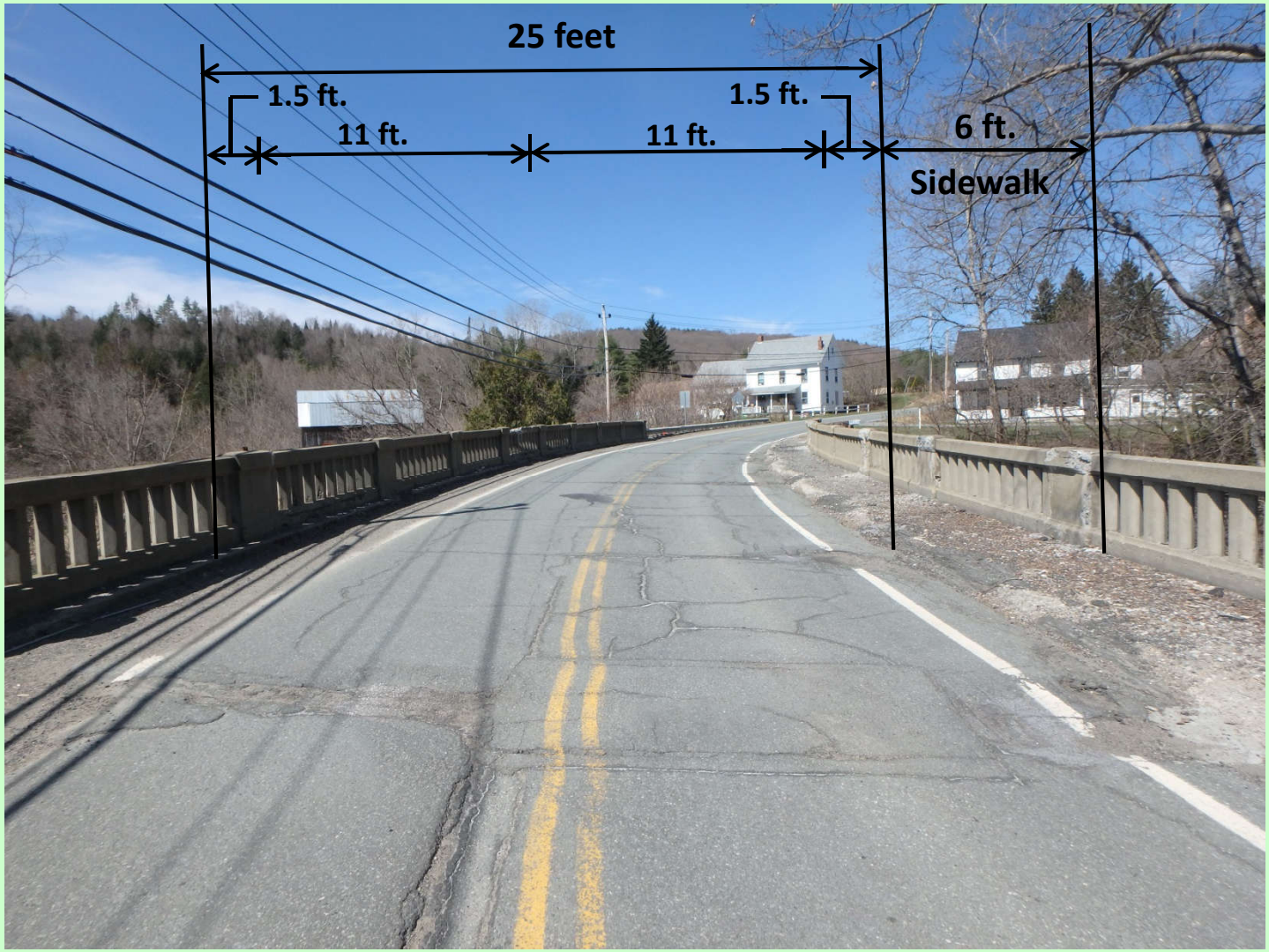
CORRUGATED STRUCTURAL STEEL PLATE ARCH TYPICAL SECTION

SCALE: 1/4" = 1′-0"

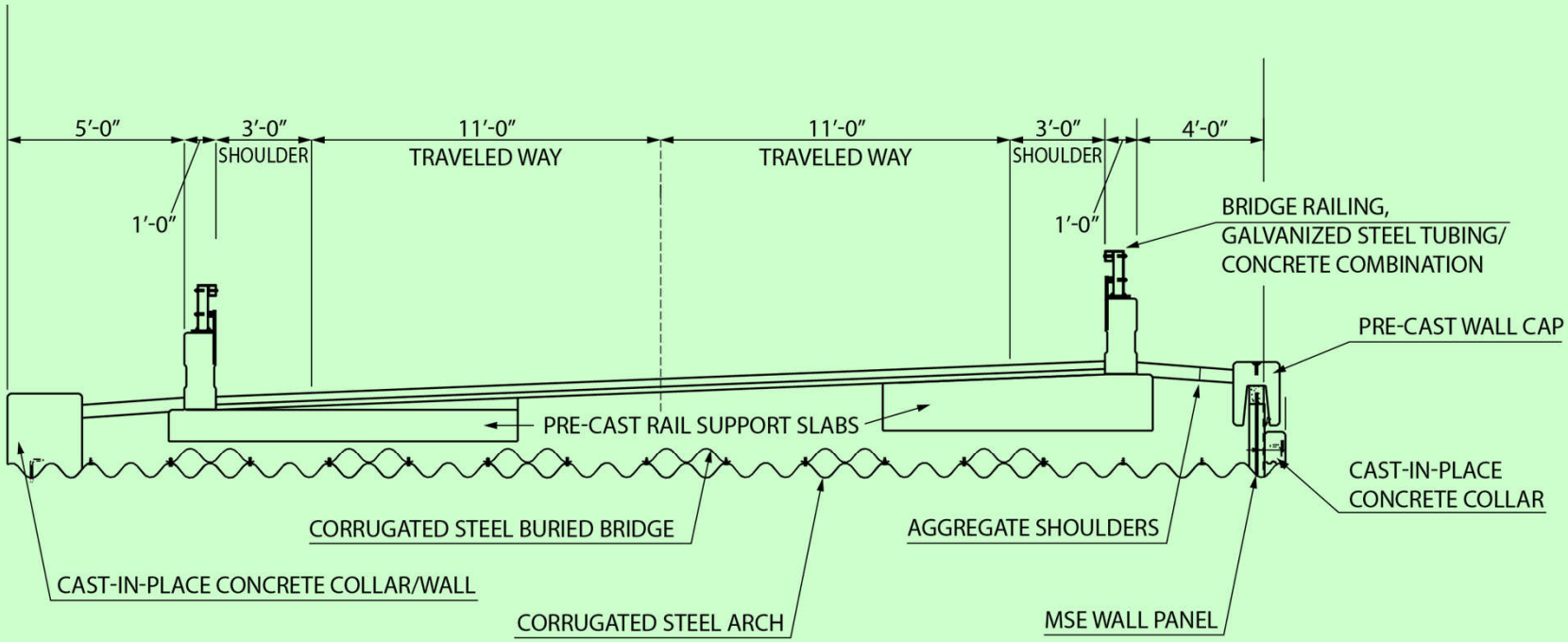
Roadway Design

- 28 feet wide
- Two 11-foot lanes
- Two 3-foot shoulders
- No sidewalk per request of Town

Existing Roadway Width

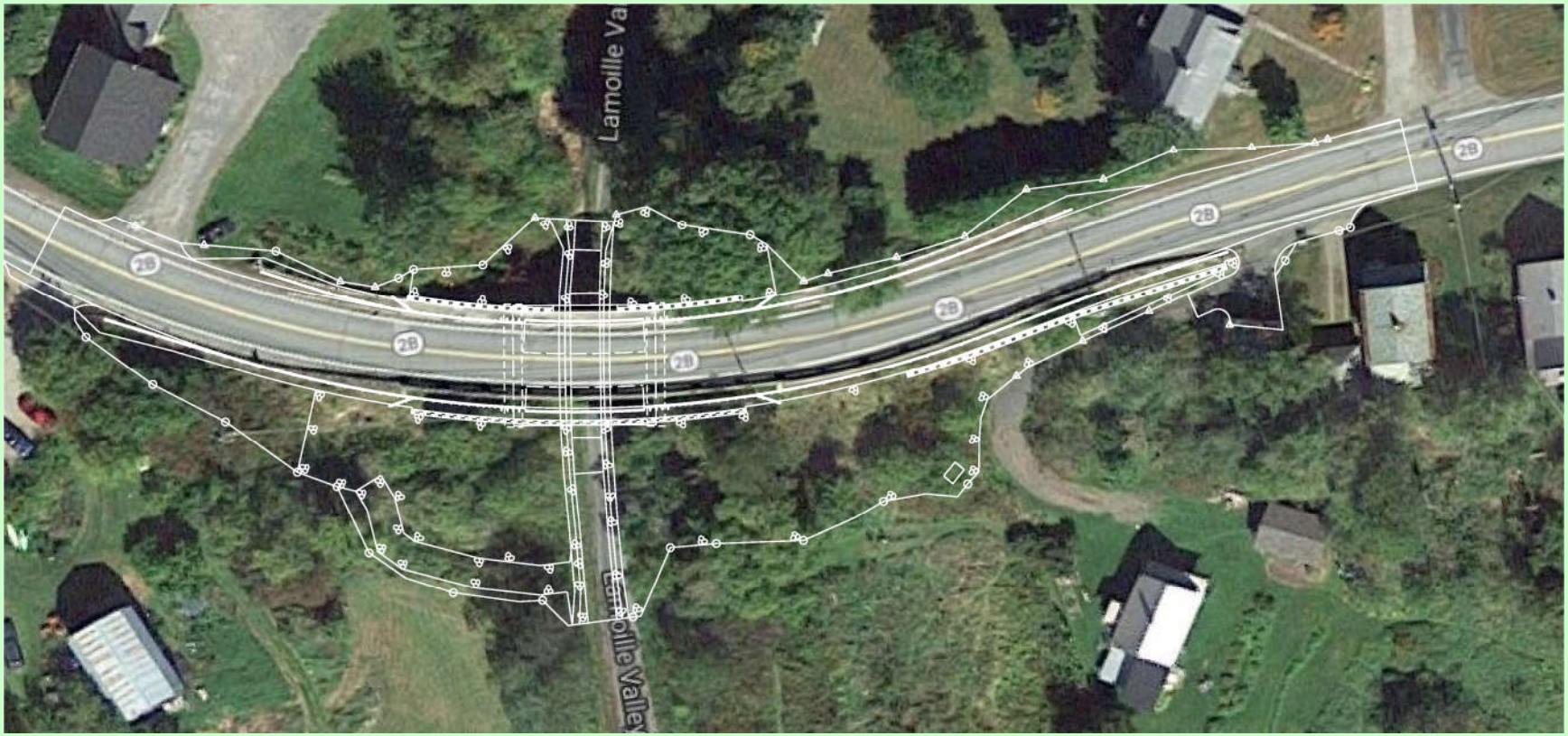


Proposed Roadway



TYPICAL LONGITUDINAL BRIDGE SECTION

Project Limits



Pre-Construction

- Relocation of utility poles (done by others)
- Mobilize equipment on site
- Delivery of long lead items (precast slabs, wall panels, arch etc.)

Construction

- Demolition of old bridge and excavation
- Install arch footings
- Bolt together arch
- Backfill and compact, install wall panels and instrumentation
- Install rail support slabs

Construction

- Field cast the concrete for lower bridge rail
- Construct driveway wall
- Construct roadway fill
- Install guardrail
- Pave and line stripe

Schedule

- Current RT 2B closure outlook
  - Start closure approx. May 15 – 25
  - End in 50 days
  - July 14 is goal for end of closure
  - July 28 is goal to end active construction
- 28-day LVRT Closure
  - Necessary for safety during trail and overhead work
  - Local closure at site, other trail segments still open

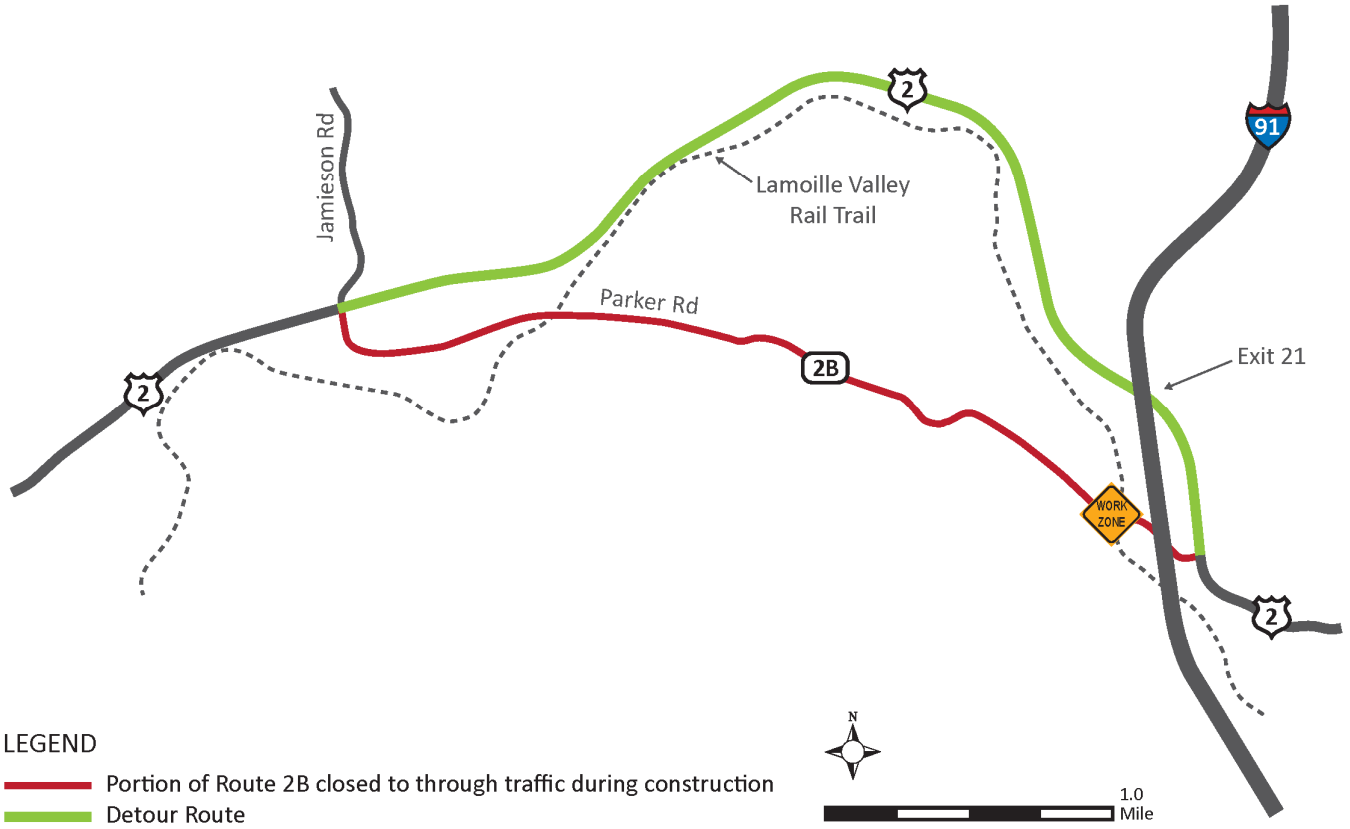
Schedule

- Contractor $ Incentives/Disincentives
  - Incentives to open trail in 28 days
  - Incentive for roadway opening in 50 days or less
  - Disincentive for roadway not open in 50 days or not open by July 14.

Roadway Detour Route

Detour Route

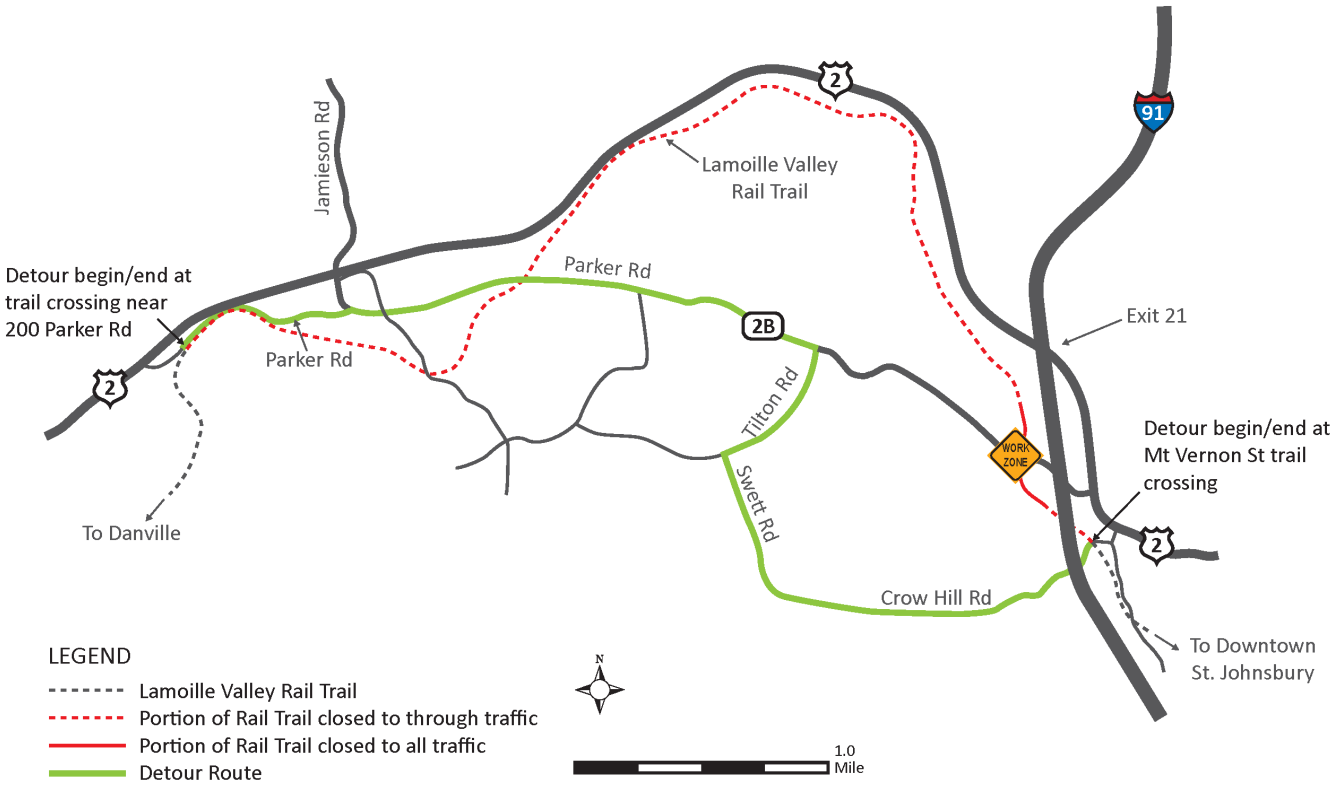
VT Route 2B Bridge 6 over the Lamoille Valley Rail Trail
St. Johnsbury



LVRT Detour Route

Town of St. Johnsbury's Designated Rail Trail Detour Route

VT Route 2B Bridge 6 over the Lamoille Valley Rail Trail
St. Johnsbury



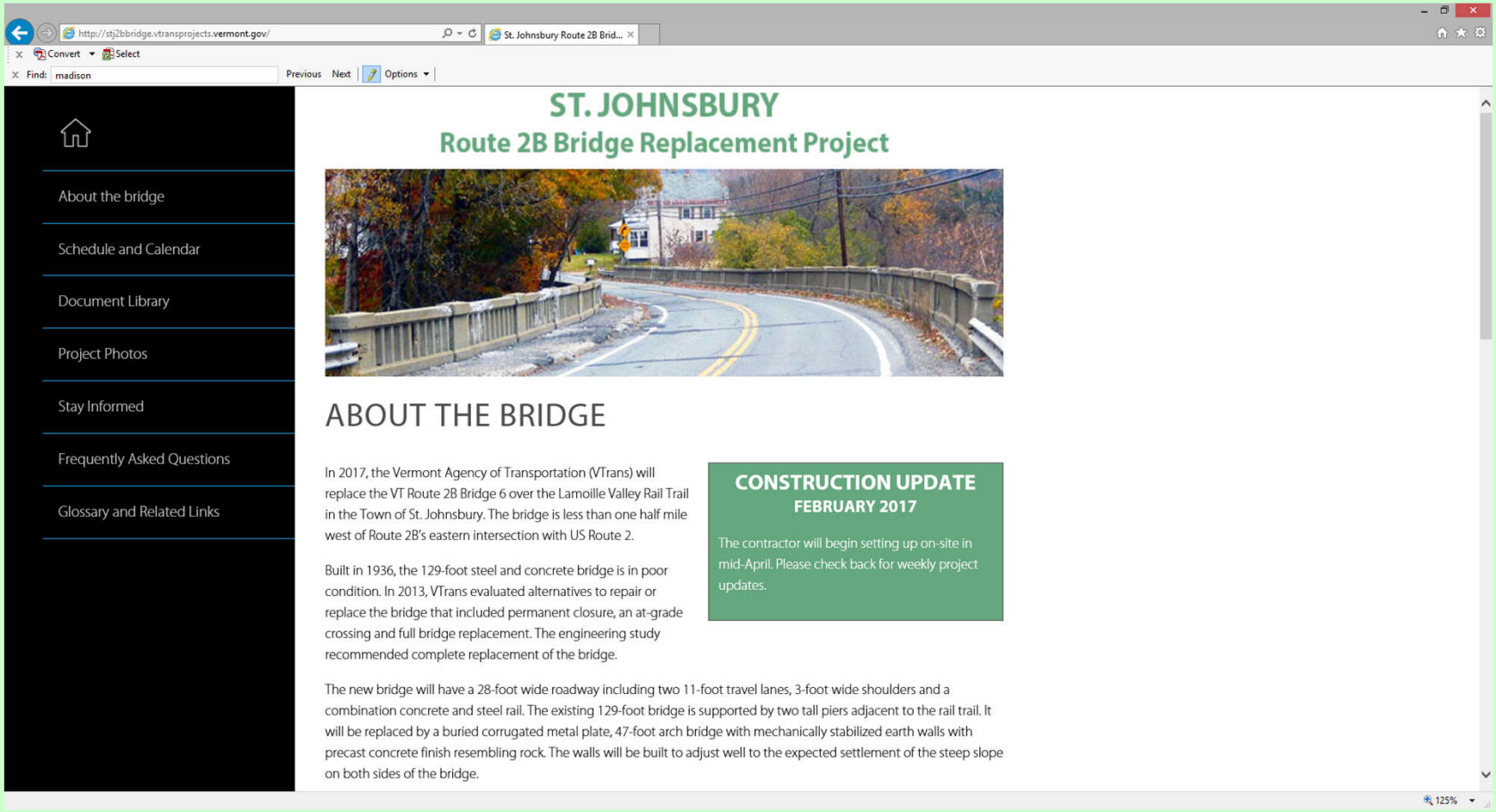
Emergency Response During Closure Period

- St. Johnsbury Fire and Vermont State Police will use alternate routes to best serve the emergency location of an incident
- Calex Ambulance will cover areas east of the project with Danville Rescue covering areas west of the project
- Some delay in response times may be expected during closure period
- St Johnsbury Police will have delay ONLY when providing mutual aid – Town coverage does not go beyond bridge

Project Communications

- Francine Perkins, Project Outreach Coordinator – 802-479-6994
- Email Alerts (weekly during construction)
- St. Johnsbury List Serve
- Local Newspapers
- Project Website – Sign up to receive updates or leave comments

www.stj2bbridge.vtransprojects.vermont.gov



Questions